

Airway ultrasound

CONFIRMING ENDOTRACHEAL TUBE PLACEMENT

Correct endotracheal tube position can be confirmed using POCUS ultrasound

- look for bilateral lung sliding
- use real time guidance to directly visualize the esophagus during an airway attempt

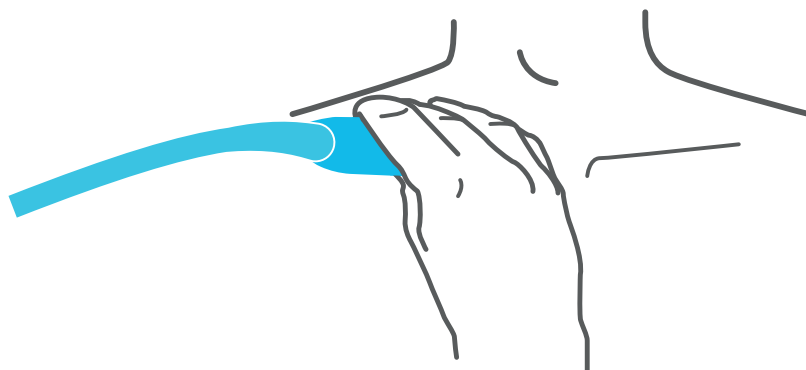
Lung sliding

Patients with a well-positioned tube should show bilateral lung sliding with ventilation. Examine the anterior chest in the mid-clavicular line as you would to look for a pneumothorax. If pulsatile movement similar to sliding, but occurring more rapidly than ventilation is observed, this indicates lung pulse. Lung pulse indicates transmission of the heart beat impulse to the pleura, but no ventilation.

Left lung	Right lung	Interpretation
Sliding	Sliding	Correct position
Lung pulse	Sliding	Right mainstem intubation
Lung pulse	Lung pulse	Esophageal placement

Real time guidance

You'll use a linear transducer applied right of midline on the inferior aspect of the neck. If the patient has a particularly thick or large neck, then the curvilinear transducer may be needed. Then slide the transducer to the right of midline as shown below.



By observing the esophagus during an intubation, the operator can determine positioning of the tube. The esophagus will distend with the endotracheal tube if the tube is placed in the esophagus. If the tube is advanced and there is no distension of the esophagus, the tube should be in the trachea. Secure the tube and check for bilateral lung sliding.